

CLAIMS

1. A dose counter for use with an inhaler comprising a container for medicament equipped with a reciprocal actuation means to dispense a dose of medicament therefrom, the dose counter comprising:

5 a fixed ratchet member,

a trigger member constructed and arranged to undergo reciprocal movement coordinated with the reciprocal movement between the actuation means and the container, said reciprocal movement comprising an outward stroke and a return stroke,

10 a counter member constructed and arranged to undergo a predetermined counting movement each time a dose is dispensed, the counter member being biased towards the ratchet and trigger members and being capable of counting motion in a direction generally orthogonal to the direction of reciprocal movement of the trigger member, the counter member comprising:

15 a first region for interaction with the trigger member which comprises at least one inclined surface which is engaged by the trigger member during its outward stroke causing the counter member to undergo counting motion,

a second region for interaction with the ratchet member which comprises at least one inclined surface which is engaged by the ratchet member during the return
20 stroke of the trigger member causing the counter member to undergo further counting motion to complete said predetermined counting movement.

2. A dose counter as claimed in Claim 1 in which the counter member is in the form of a ring.

3. A dose counter as claimed in Claim 2 in which the ring comprises inclined
25 surfaces in the form of at least one set of teeth.

4. A dose counter as claimed Claim 3 in which the ring comprises one set of teeth to interact with the trigger member and a second set of teeth to interact with the ratchet member.
- 5 5. A dose counter as claimed in Claim 3 in which the ring comprises a single set of teeth which interact with both the trigger member and the ratchet member.
6. A dose counter as claimed in Claim 4 or Claim 5 in which the counter member comprises teeth which are defined by two inclined surfaces.
7. A dose counter as claimed in Claim 4 or 5 in which the counter member comprises teeth which are defined by an inclined surface and a vertical surface.
- 10 8. A dose counter as claimed in Claim 6 as dependent on claim 4 or Claim 7 as dependent on claim 4 in which there is a flat region between adjacent teeth.
9. A dose counter according to any preceding Claim in which the first region of interaction is longer than the second region of interaction.
- 15 10. A dose counter according to any preceding Claim in which an incomplete part of the counting motion associated with the first region of interaction followed by reverse movement of the trigger member does not result in a net counting motion.
- 20 11. A dose counter according to any preceding Claim in which an incomplete part of the counting motion associated with the second region of interaction followed by reverse movement of the trigger member does not result in counting motion beyond said predetermined counting movement.
12. A dose counter according to any one of Claims 2 to 11 which comprise a second counting ring which undergoes counting motion in response to counting movement of the counter ring.
- 25 13. A dose counter as claimed in any preceding claim which comprises a housing to accommodate the counter member, said ratchet member being fixed to the housing.

14. A dose counter as claimed in any preceding claim in which the counter member is resiliently biased.

15. A dose counter as claimed in Claim 14 in which the counter member is resiliently biased by a coil spring or leaf spring.

5 16. An inhaler incorporating a dose counter as defined in any preceding claim.

17. An inhaler as claimed in Claim 16, in which the container of the inhaler contains a medicinal aerosol formulation.

18. An inhaler as claimed in Claim 16 of Claim 17 in which the trigger member is attached to the inhaler container and/or valve ferrule.